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A Census of the Avifauna of the FAP 827 Project Area



by

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**Center for Biodiversity
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Introduction

The Illinois Department of Transportation has proposed to replace the bridge over the Wabash River at Mount Carmel, Wabash County, Illinois (FAP 827; Figure 1). As requested by IDOT, we conducted a four season census of the birds within the proposed corridor. This report contains the results of a search of historical records of Endangered and Threatened avian species from the project area (Wabash County, IL and Gibson County, IN) and of our four season census, and our assessment of the avian community within the project area.

Historical Records

We consulted three sources, the Illinois Natural Heritage database, the Illinois Fish and Wildlife Information Service, and the Illinois Breeding Bird Atlas, to establish historic use of the area by endangered and threatened avian species in Wabash County, IL., and to identify endangered and threatened species likely to occur in the Illinois portion of the project area. We also consulted with the Indiana Department of Natural Resources to identify endangered and threatened species likely to occur in the Indiana portion (Anderson County) of project area. The results of this search are presented in Table 1.

We found records of six Illinois Endangered, and two Illinois Threatened species for Wabash County, IL (Table 1) over the past 20 years (1975-1994). No records of endangered or threatened species for Anderson County, IN were found.

We also searched the corridor for potential breeding habitat for all Endangered and Threatened species listed in Table 1. We identified potential breeding areas by using aerial photographs and topographic maps. We then visited all of the identified areas and made assessments of habitat quality. Our assessments are based on published breeding requirements for these species (Bohlen 1989; Herkert 1992).

We found no quality breeding habitat within the corridor for any Endangered or Threatened species.

Census Methods

We established 11 census points representing habitat types within the corridor (Figures 2 and 3). Legal descriptions of these points are given in Table 2. A brief description of the habitat surrounding each census point is provided in Table 3.

The year was divided into four census seasons corresponding to major periods of the avian life cycle in the midwest (Table 4). Because of the migratory habits of birds, each of these seasons is expected to have a different and distinctive complement of resident species.

All census points and areas were visited twice, once early and once late, in each season. During these visits we used modified point-counts to determine species composition and abundance (Blondel et al. 1981).

We began our censuses in September of 1994 and they were completed in June of 1995.

We also scored the magnitude of the concern for each species in each season. For the breeding and winter seasons we used indices developed by the *Partners in Flight*, a working group of North American avian ecologists (Thompson et al. 1992). Birds are scored on a scale from 1 (low concern) to 5 (extremely high concern) (Hunter et al. 1992). In constructing these indices the

following factors were considered: abundance, distribution, threats (e.g. habitat loss, demographic vulnerability, etc.) and population trend (Hunter et al. 1992).

The Partners in Flight group has yet to develop a similar index for birds during migration so we developed our own with the help of Dr. J. Herkert of the Illinois Endangered Species Protection Board and Dr. S. K. Robinson of the Center for Wildlife Ecology at the Illinois Natural History Survey. Both Drs. Herkert and Robinson participated in the initial *Partners in Flight* work. We used three parameters in formulating the migratory concern index: 1. the population size of the species in the midwest (using the *Partners in Flight* abundance ranking), 2. the population trend of the species over the past ten years (using the *Partners in Flight* population estimates), and 3. the degree of migratory habitat specificity (as ranked by S. K. Robinson and D. A. Enstrom).

We provide these concern indices as a tool to help assess the relative importance to the avian community of the various habitat types within the corridor. Typically, endangered and threatened species have concern scores of 3 or above. Clearly, there are other species that are subject to significant threats and which should be considered when assessing the value of a particular parcel of land. Areas which support many species of moderate concern may be very important to the local avifauna. We define a "species of concern" as one that is either officially designated as endangered or threatened (by the State or Federal governments) and/or one that has a concern index value ≥ 3 (Thompson et al. 1992; Robinson and Enstrom, unpublished data). Therefore, the number of 'species of concern' present in a habitat provides a measure of the relative importance of that habitat to the avian community. We feel this measure is better than traditional measures of habitat quality (e.g. species richness or 'diversity') because it more accurately reflects the potential impact that disturbance of a given parcel would have on the bird community of the surrounding area.

To date the *Partener in Flight* group has focused its efforts on migratory species and, therefore, concern scores are not available for some species. Non-migrants, such as some woodpeckers and chickadees, or species that do not leave the United States during migration, such as some sparrows and most ducks, have yet to be scored.

Census Results

We recorded 1090 individuals of 107 species and 32 families during our surveys (Table 5). We also recorded four Illinois Endangered and two Illinois Threatened species during our censuses (Table 5).

Spring

We recorded 321 individuals representing 29 families and 82 species during the spring census. Census data for all points are presented in Table 6. In Table 6 we also present values for species richness and indices of concern.

We recorded one Illinois Endangered species during the spring census. A single **Sharp-shinned Hawk** was seen in the forest at point 10 (Figure 3). This species is common throughout Illinois during the spring and fall migrations. Therefore, this sighting is not indicative of critical migratory habitat for this species.

We recorded two Illinois Threatened Species. We recorded a single **Brown Creeper**, Illinois Threatened, was seen in the floodplain forest on the Illinois side of the river (Figure 2). The **Brown Creeper** is also common throughout Illinois during the fall migration. Therefore, this is a significant is not indicative of high quality habitat for this species. We also saw one **Pied-billed Grebe** at the pond at census point 9 (Figure 3). This species is also widespread in Illinois during both the fall and spring migration, and we feel that this sighting is not significant.

Species richness and species of concern values were not high for any of the census areas during this period (Table 8). The areas in the proposed corridor do not appear to provide quality habitat for migrants.

Breeding

We recorded **365** individuals representing **24** families and **64** species during our breeding season census. Census data for all points are presented in Table 7. In Table 7 we also present values for species richness and indices of concern.

A single **Black-crowned Night Heron**, Illinois Endangered, was seen late in the breeding season at point 8 (Figure 4). We searched the area for heron nests and are confident that this animal did not breed in the corridor. Night Herons typically forage far from their colonies and it is likely that this animal was a transient. In addition, the wetlands within the corridor are small and of low quality (Ketzner and Keene 1995) and do not provide high quality foraging areas for this species.

None of the habitats within the corridor provide high quality avian breeding areas. Consistent with this assessment, we recorded no more than four species of concern at any of our census points.

Fall

We recorded **135** individuals representing **18** families and **35** species during our fall census (Table 7). Census data for all points are presented in Table 8. We also present indices of concern and species richness values in Table 8.

Two Illinois Endangered species were seen during our fall census work. A single **Cooper's Hawk** was recorded. This species can be found anywhere in Illinois during migration (Bohlen 1989). We also recorded a single **Northern Harrier** passing over the edge of the corridor hunting in the field surrounding point 11 (Figure 3). This species is also widespread in the midwest during migration. We do not feel either of these sightings are indicative of critical or high quality migratory habitat within the corridor (Bohlen 1989).

Species richness and species of concern values were not high for any of the census areas during this period (Table 8). The areas in the proposed corridor do not appear to provide quality habitat for migrants.

Winter

We recorded **264** individuals representing **16** families and **27** species during our winter visits. Winter census data for all points are presented in Table 9.

No Endangered or Threatened species were found within the corridor during the winter season.

Species richness and species of concern values were low at all the census points during the winter. The areas in the corridor do not appear to provide important winter habitat.

Summary

We found few Endangered or Threatened species within the corridor. Those that were detected were transients, occurring during the spring or fall migrations.

In general, the quality of avian habitat, for breeding, migration or overwintering, is not high in the corridor. There is no adequate breeding habitat, or critical migratory habitat, in the corridor for any Endangered or Threatened species.

Literature Cited

Blondel, J., C. Ferry, and B. Franchot. 1981. Point counts with unlimited distance. Studies in Avian Biology 6: 414-420.

Bohlen, H. D. 1989. *The birds of Illinois*. Bloomington: Indiana University Press.

Herkert, J. R. 1992. *Endangered and threatened species of Illinois: Status and distribution*. 2 vols. Vol. 2. Springfield, IL: Illinois endangered species protection board.

Hunter, W. C., M. R. Carter, D. N. Pashley, and K. Barker. 1992. The Partners in Flight species prioritization scheme. in Status and management of neotropical migratory birds U.S. Dept. of Agriculture General Technical Report RM-229.

Ketzner, D., P. Tessene and D. Keene. 1995. Biological survey for a new crossing of the Wabash River (FAP 827; IL 15), Wabash County, IL, and Gibson County, IN. Report submitted to Bureau of Design and Environment, Illinois Department of Transportation, Springfield. 46 p.

Thompson, F. R., S. J. Lewis, J. Green, and D. Ewert. 1992. "Status of neotropical migrant landbirds in the midwest: Identifying species of management concern. in Status and management of neotropical migratory birds U.S. Dept. of Agriculture General Technical Report RM-229.

Table 1. Endangered and Threatened birds of Wabash Co. IL and Gibson Co. IN. 1975 to present.

Species	Status	Area Breeding Record	Habitat Within the Corridor
American Bittern	IL Endangered	Possible	Poor
Northern Harrier	IL Endangered	Probable	Poor
Red-shouldered Hawk	IL Endangered	Possible	Poor
Common Tern	IL Endangered	Possible	Absent
Long-eared Owl	IL Endangered	Possible	Poor
Brown Creeper	IL Threatened	Probable	Marginal
Bewick's Wren	IL Endangered	Confirmed	Marginal
Loggerhead Shrike	IL Threatened	Confirmed	Poor

Table 2. Census point locations. Legal location, site number (Ketzner and Keene 1995) for each of the census points used during the avian censuses conducted in the FAP 827 project corridor.

Census point	Site Number	Legal Discription
1	2	Wabash Co., IL; T 1S, R 12W; Section 28, SW/4, SW/4, NW/4; Mount Carmel, IL 75.' series USGS topographic quadrangle map.
2	2	Wabash Co., IL; T 1S, R 12W; Section 28, SW/4, NW/4, SW/4; Mount Carmel, IL 75.' series USGS topographic quadrangle map.
3	2 / 22	Wabash Co., IL; T 1S, R 12W; Section 28, SW/4, NW/4, NE/4; Mount Carmel, IL 75.' series USGS topographic quadrangle map.
4	8	Gibson Co., IN; T 1S, R 12W; Section 28, SW/4, NE/4, SE/4; Mount Carmel, IL 7.5.' series USGS topographic quadrangle map.
5	7	Gibson Co., IN; T 1S, R 12W; Section 28, SW/4, SE/4, NW/4; Mount Carmel, IL 75.' series USGS topographic quadrangle map.
6	7	Gibson Co., IN; T 1S, R 12W; Section 28, SW/4, SE/4, SW/4; Mount Carmel, IL 75.' series USGS topographic quadrangle map.
7	19	Gibson Co., IN; T 1S, R 12W; Section 33, NW/4, NE/4, NE/4; Mount Carmel, IL 75.' series USGS topographic quadrangle map.
8	18	Gibson Co., IN; T 1S, R 12W; Section 33, NE/4, NW/4, NW/4; East Mount Carmel, IN 75.' series USGS topographic quadrangle map.
9	14	Gibson Co., IN; T 1S, R 12W; Section 28, NE/4, NE/4, SW/4; East Mount Carmel, IN 75.' series USGS topographic quadrangle map.
10	17	Gibson Co., IN; T 1S, R 12W; Section 28, SE/4, SW/4, NW/4; Mount Carmel, IL 75.' series USGS topographic quadrangle map.
11	-	Gibson Co., IN; T 1S, R 12W; Section 34, NW/4, NW/4, SW/4; East Mount Carmel, IN 75.' series USGS topographic quadrangle map.

Table 3. Census point habitat descriptions. Site numbers are after Ketzner and Keene (1995).

Census Point	Site Number	Habitat Description
1	2	Floodplain forest.
2	2	Floodplain forest.
3	2 / 22	Floodplain forest / park land.
4	8	Floodplain forest.
5	7	Floodplain forest.
6	7	Floodplain forest.
7	19	Forbland.
8	18	Pond / scrub-shrub.
9	14	Pond
10	17	Floodplain forest
11	-	Hayfield

Table 4. Census seasons.

Season	Inclusive dates
Winter	1 December to 28 February
Spring	1 March to 30 April
Breeding	1 May to 31 August
Fall	1 September to 30 November

Table 5. List of observed species. All census periods. † = Illinois Endangered, ‡ = Illinois Threatened, * = introduced species.

Family / Species	Family / Species	Family / Species
Podicipedidae	Common Snipe	Corvidae
Pied-billed Grebe †	Laridae	Blue Jay
Ardeidae	Ring-billed Gull	American Crow
Great Blue Heron	Columbidae	Paridae
Green-backed Heron	Rock Dove *	Carolina Chickadee
Black-crowned Night-Heron †	Mourning Dove	Tufted Titmouse
Anatidae	Cuculidae	Sittidae
Canada Goose	Yellow-billed Cuckoo	Red-breasted Nuthatch
Wood Duck	Apodidae	White-breasted Nuthatch
Mallard	Chimney Swift	Certhiidae
Blue-winged Teal	Trochilidae	Brown Creeper ‡
Northern Shoveler	Ruby-throated Hummingbird	Troglodytidae
Cathartidae	Alcedinidae	Carolina Wren
Turkey Vulture	Belted Kingfisher	House Wren
Accipitridae	Picidae	Mucicapidae (Sylviinae)
Northern Harrier †	Red-headed Woodpecker	Golden-crowned Kinglet
Sharp-shinned Hawk †	Red-bellied Woodpecker	Ruby-crowned Kinglet
Cooper's Hawk †	Yellow-bellied Sapsucker	Blue-gray Gnatcatcher
Broad-winged Hawk	Downy Woodpecker	Mucicapidae (Turdinae)
Red-tailed Hawk	Northern Flicker	Eastern Bluebird
Falconidae	Tyrannidae	Swainson's Thrush
American Kestrel	Eastern Wood-Pewee	Wood Thrush
Phasianidae	Eastern Phoebe	American Robin
Northern Bobwhite	Least Flycatcher	Mimidae
Rallidae	Great Crested Flycatcher	Gray Catbird
American Coot	Eastern Kingbird	Northern Mockingbird
Charadriidae	Hirundinidae	Brown Thrasher
Killdeer	Tree Swallow	Bombacillidae
Scolopacoidae	N. Rough-winged Swallow	Cedar Waxwing
Lesser Yellowlegs	Barn Swallow	Sturnidae
Spotted Sandpiper		European Starling *
Solitary Sandpiper		

Table 5. List of observed species. (continued)

Family / Species	Family / Species
Vireonidae	Emberizidae (Emberizinae)
Solitary Vireo	Rufous-sided Towhee
White-eyed Vireo	American Tree Sparrow
Warbling Vireo	Chipping Sparrow
Yellow-throated Vireo	Field Sparrow
Philadelphia Vireo	Savannah Sparrow
Red-eyed Vireo	Fox Sparrow
	Song Sparrow
Emberizidae (Parulinae)	White-crowned Sparrow
Tennessee Warbler	White-throated Sparrow
Nashville Warbler	Dark-eyed Junco
Northern Parula	
Yellow Warbler	Emberizidae (Icterinae)
Yellow-rumped Warbler	Red-winged Blackbird
Black-throated Green Warbler	Eastern Meadowlark
Blackpoll Warbler	Common Grackle
Magnolia Warbler	Brown-headed Cowbird
Palm Warbler	Northern Oriole
Black and White Warbler	
American Redstart	Fringillidae
Common Yellowthroat	Purple Finch
Yellow-breasted Chat	
Emberizidae (Thraupinae)	House Finch
Scarlet Tanager	American Goldfinch
Emberizidae (Cardinalinae)	Passeridae
Northern Cardinal	House Sparrow *
Rose-breasted Grosbeak	
Indigo Bunting	

Table 6. Spring Census Data. Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent the sum of the two censuses conducted at each census point. Counts for each species at each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al, 1992). † = Illinois Endangered, ‡ = Illinois Threatened, * = Non-native.

Family / Species	Census Point / Area											Total count	C
Podicipedidae													
Pied-billed Grebe ‡									1			1	-
Ardeidae													
Great Blue Heron	1							1	1			3	-
Green-backed Heron								1				1	-
Anatidae													
Canada Goose									2			2	-
Wood Duck						2		1				3	-
Blue-winged Teal									3			3	-
Northern Shoveler									1			1	-
Cathartidae													
Turkey Vulture											2	2	1.3
Accipitridae													
Sharp-shinned Hawk †					1					1		2	2.3
Broad-winged Hawk				1		1						2	3
Red-tailed Hawk								1				1	1.3
Falconidae													
American Kestrel			1									1	1
Phasianidae													
Northern Bobwhite								2				2	-
Rallidae													
American Coot									3			3	-
Charadriidae													
Killdeer			1				1	2				4	1
Scolopacoidae													
Lesser Yellowlegs								1				1	-
Spotted Sandpiper			1									1	-
Common Snipe							1	1				2	-
Laridae													
Ring-billed Gull									3			3	-
Columbidae													
Rock Dove *			10									10	-
Mourning Dove	2	3	5		2	3		3		2	4	24	1
Trochilidae													
Ruby-throated Hummingbird						1				1		2	2.3
Alcedinidae													
Belted Kingfisher	1							1	1			3	1.7
Picidae													
Red-headed Woodpecker				1		1						2	-
Red-bellied Woodpecker	3	2			2			2		1		10	-
Yellow-bellied Sapsucker	1			1								2	2
Downy Woodpecker	2		1	2	1	2				3		11	-
Northern Flicker		1	2	1			1		1			6	2.3

Table 6. Spring Census Data. (continued)

Family / Species	Census Point / Area											Total count	C
	1	2	3	4	5	6	7	8	9	10	11		
Tyrannidae													
Eastern Wood-Pewee				1	1					2		4	2.3
Least Flycatcher		1				1						2	2.7
Eastern Phoebe			1									1	1.3
Great Crested Flycatcher		1		1								2	2.7
Eastern Kingbird							2		1			3	2
Hirundinidae													
Tree Swallow			6					15	2			23	2.3
N. Rough-winged Swallow									4			4	2
Corvidae													
Blue Jay	4	2	6	2		1		2		2		19	-
American Crow	3						4		3			10	-
Paridae													
Carolina Chickadee	2			2	1	4		3				12	-
Tufted Titmouse	3			1	2					3		9	-
Sittidae													
White-breasted Nuthatch				1		1						2	-
Certhiidae													
Brown Creeper $\frac{1}{2}$	1											1	2.3
Troglodytidae													
Carolina Wren	1	2		1		1				2	1	8	-
House Wren		1			1		1		1			4	1.3
Mucicapidae (Sylviinae)													
Golden-crowned Kinglet			1		1							2	2.3
Ruby-crowned Kinglet		1		1		1						3	-
Blue-gray Gnatcatcher				1								1	1.7
Mucicapidae (Turdinae)													
Eastern Bluebird											2	2	1.3
Swainson's Thrush	1			1								2	-
Wood Thrush				1						1		2	2.3
American Robin	4	2	4		2		3			3	1	19	1
Mimidae													
Gray Catbird				1	1							2	2
Northern Mockingbird			2									2	1.3
Brown Thrasher			1		2		1			1		5	-
Sturnidae													
European Starling *	3					3						6	-
Vireonidae													
Solitary Vireo		1										1	3
Philadelphia Vireo					1							1	2.7
Red-eyed Vireo				1		1				1		3	2.3
Emberizidae (Parulinae)													
Tennessee Warbler		1	1						1			3	2.3
Nashville Warbler										1		1	3

Table 6. Spring Census Data. (continued)

Family / Species	Census Point / Area											Total count	C
	1	2	3	4	5	6	7	8	9	10	11		
Magnolia Warbler				2	1	1				1		5	1.7
Yellow-rumped Warbler	1			1								2	
Black-throated Green Warbler			1									1	2.3
Palm Warbler											3	3	1.7
Blackpoll Warbler				1								1	2.3
American Redstart			1		1	2			1			5	2
Common Yellowthroat							1	1			2	4	2.3
Emberizidae (Thraupinae)													
Scarlet Tanager										1		1	2
Emberizidae (Cardinalinae)													
Northern Cardinal	1		2	2	1	2						8	-
Rose-breasted Grosbeak										1		1	2.7
Indigo Bunting					2		3					5	2.3
Emberizidae (Emberizinae)													
Rufous-sided Towhee				1				1		1		3	1.7
Field Sparrow							1				2	3	-
Fox Sparrow		2										2	-
Song Sparrow	2		1		1				2	1	3	10	1
White-throated Sparrow			4	3	2	1	6			2		18	-
Emberizidae (Icterinae)													
Red-winged Blackbird							17					17	2.3
Common Grackle			3			2						5	-
Brown-headed Cowbird				3						2		5	1
Northern Oriole		1										1	2
Fringillidae													
House Finch				1								1	-
American Goldfinch	1		2		3				3	2	4	15	2
Passeridae													
House Sparrow *			10	2								12	-
Total individuals	37	25	77	37	29	31	43	38	34	36	24	321	
Total species (richness)	19	14	23	27	12	19	13	16	18	23	10	82	
Endangered species	0	0	0	0	0	0	0	0	0	0	0	1	
Threatened species	1	0	0	0	0	0	0	0	1	0	0	1	
Species of concern	1	1	0	0	0	0	0	0	1	1	0	4	

Table 7. Breeding Census Data. Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent the highest count of the two censuses conducted at each census point. Counts for each species at each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al, 1992).

* = Non-native species.

[illegible]

Table 7. Breeding Census Data.

Family / Species	Census Point / Area											Total count	C
Troglodytidae													
Carolina Wren	2	1								1		4	-
House Wren			2		1	1				3		7	1
Mucicapidae (Sylviinae)													
Blue-gray Gnatcatcher		2			2					1		5	3
Mucicapidae (Turdinae)													
Eastern Bluebird					1						1	2	1.5
Wood Thrush										1		1	4
American Robin	3	2								1	2	8	1
Mimidae													
Gray Catbird			2		2	1			1			6	3
Northern Mockingbird			2									2	1
Brown Thrasher	2		1		1	2		1				7	-
Bombycillidae													
Cedar Waxwing				2								2	2
Sturnidae													
European Starling*	4	3	6			4	6		3			16	-
Vireonidae													
White-eyed Vireo									1			1	3
Yellow-throated Vireo					1							1	3
Warbling Vireo	1		3			2						6	2
Red-eyed Vireo				1								1	2
Emberizidae (Parulinae)													
Northern Parula									1		1	2	4
Yellow Warbler									1			1	3
American Redstart										2		2	-
Common Yellowthroat							2	1				3	2
Yellow-breasted Chat							1					1	3
Emberizidae (Thraupinae)													
Scarlet Tanager				1						2		3	3
Emberizidae (Cardinalinae)													
Northern Cardinal	3		2	3	1	2			2	1		14	-
Indigo Bunting	1	3	2	1			4	2	2	2		17	2
Emberizidae (Emberizinae)													
Rufous-sided Towhee	1			2	1							4	3
Chipping Sparrow			1									1	2
Field Sparrow	1						2				2	5	-
Savannah Sparrow											1	1	3
Song Sparrow	3		1			2	1		1			8	3
Emberizidae (Icterinae)													
Red-winged Blackbird							3				6	9	2
Eastern Meadowlark							4				3	7	3
Common Grackle	12		3	2						1		18	-
Brown-headed Cowbird	2	1	2	1	1				2	1		10	1
Northern Oriole			1			1						2	3

Table 7. Breeding Census Data.

Family / Species	Census Point / Area											Total count	C
	1	2	3	4	5	6	7	8	9	10	11		
Fringillidae													
House Finch									1			1	-
American Goldfinch	2						2	3	2	1	4	14	2
Passeridae													
House Sparrow*				4				4				8	-
Total individuals	53	32	42	39	23	25	31	23	37	31	29	365	
Total species (richness)	18	13	20	20	12	14	15	15	22	20	13	64	
Endangered species	0	0	0	0	0	0	0	1	0	0	0	1	
Threatened species	0	0	0	0	0	0	0	0	0	0	0	0	
Species of concern	2	3	3	3	4	4	3	1	4	2	2	15	

Table 8. Fall Census Data. Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992).
† = Illinois Endangered, ‡ = Illinois Threatened, * = Non-native species.

Family / Species	Census Point / Area											Total count	C
Ardeidae													
Great Blue Heron					1			1				2	-
Green-backed Heron									2			2	-
Anatidae													
Wood Duck								1	3			4	-
Mallard								1				1	-
Blue-winged Teal													
Northern Shoveler									4			4	-
Cathartidae													
Turkey Vulture											6	6	1.3
Accipitridae													
Northern Harrier †											1	1	2
Cooper's Hawk †		1										1	2.3
Red-tailed Hawk	1											1	1.3
Falconidae													
American Kestrel			1				1					2	1
Phasianidae													
Northern Bobwhite								2				2	-
Charadriidae													
Killdeer			2								1	3	1
Scolopacoidae													
Lesser Yellowlegs								6				6	-
Spotted Sandpiper									1			1	-
Solitary Sandpiper									2			2	-
Laridae													
Ring-billed Gull											4	4	-
Columbidae													
Rock Dove *			15									15	-
Mourning Dove	2		3			4		2	3		1	15	1
Apodidae													
Chimney Swift								2				2	2.3
Alcedinidae													
Belted Kingfisher													1.7
Picidae													
Red-headed Woodpecker						1						1	-
Red-bellied Woodpecker	1	2	1	1	1	3		1	2	2		14	-
Yellow-bellied Sapsucker			1									1	2
Downy Woodpecker	1	1		2	1			2	1			8	-
Northern Flicker	1		2				2			1		6	2.3
Tyrannidae													
Eastern Phoebe			1						1			2	1.3
Hirundinidae													
Tree Swallow									12			12	2.3

Table 8. Fall Census Data. (continued)

Family / Species	Census Point / Area											Total count	C
	1	2	3	4	5	6	7	8	9	10	11		
Corvidae													
Blue Jay	2	4	2	1	1	2				4		16	-
American Crow						7	4	6				17	-
Paridae													
Carolina Chickadee	1		2	3		1				2		9	-
Tufted Titmouse		1		2	3	1						7	-
Sittidae													
Red-breasted Nuthatch					1							1	-
White-breasted Nuthatch	1					1						2	-
Certhiidae													
Brown Creeper $\frac{1}{2}$	2	1										3	2.3
Troglodytidae													
Carolina Wren	1	2		1		2						6	-
Mucicapidae (Sylviinae)													
Golden-crowned Kinglet	2		3		3	1						9	2.3
Mucicapidae (Turdinae)													
Eastern Bluebird					2				3			5	1.3
Swainson's Thrush					1							1	-
Hermit Thrush										1		1	-
Wood Thrush													2.3
American Robin	2	1	3	4	1		3	1		2		17	1
Mimidae													
Northern Mockingbird			1									1	1.3
Bombycillidae													
Cedar Waxwing							8					8	2.3
Sturnidae													
European Starling *	2		4						10			16	-
Emberizidae (Parulinae)													
Black-throated Green Warbler	1		1			2				1		5	2.3
Palm Warbler			2				1					3	1.7
Blackpoll Warbler							1			1		2	2.3
Black-and-white Warbler						1						1	2.3
Emberizidae (Cardinalinae)													
Northern Cardinal	1	1	2	2				2		1		9	-
Emberizidae (Emberizinae)													
American Tree Sparrow							4					4	-
Chipping Sparrow			1									1	1
Field Sparrow											1	1	-
Savannah Sparrow											1	1	3
Song Sparrow		1									2	3	1
White-throated Sparrow	1		4		3			1			18	25	-
White-crowned Sparrow											2	2	2.7
Dark-eyed Junco			2			2					3	7	-

Table 8. Fall Census Data. (continued)[illegible]

Table 9. Winter Census Data. Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992). * = Non-native species.

Family / Species	Census Point / Area											Total count	C
Ardeidae													
Great Blue Heron	2								1			3	-
Green-backed Heron								1	1			2	-
Accipitridae													
Red-tailed Hawk								1				1	1
Falconidae													
American Kestrel			2					2				4	2
Laridae													
Herring Gull										2		2	-
Columbidae													
Rock Dove			6									6	-
Mourning Dove								2	1	3	1	7	1
Alcedinidae													
Belted Kingfisher									1			1	1.5
Picidae													
Red-bellied Woodpecker	2			1	1			1		2	1	8	-
Downy Woodpecker	2	2	1	1	1	2		1		1	2	13	-
Northern Flicker						1						1	3
Corvidae													
Blue Jay						2						2	-
American Crow			3			4		1				8	-
Paridae													
Carolina Chickadee	3	5	5	18	2	6	3		2	8	6	58	-
Tufted Titmouse	6	2	4	2	13							27	-
Sittidae													
White-breasted Nuthatch		1		3			1					5	-
Troglodytidae													
Carolina Wren	1	1				2					1	5	-
Mucicapidae (Sylviinae)													
Golden-crowned Kinglet	4	10	2			3				3	3	25	3
Mucicapidae (Turdinae)													
Eastern Bluebird					4							4	3
Sturnidae													
European Starling	1	4	12				1	2			6	26	-
Emberizidae (Cardinalinae)													
Northern Cardinal	1	4	1			3	1	1		3	3	17	-
Emberizidae (Emberizinae)													
Song Sparrow	3		1		1			2	1		1	9	1
White-throated Sparrow				2	2					1	1	6	-

Table 9. Winter Census Data. (continued)

Family / Species	Census Point / Area											Total count	C
	1	2	3	4	5	6	7	8	9	10	11		
Fringillidae													
House Finch									1			1	-
American Goldfinch					5		4	2	2			9	-
Passeridae													
House Sparrow					10							10	-
Total individuals	25	29	37	27	39	23	10	16	10	23	25	264	
Total species (richness)	10	8	10	6	9	8	5	11	8	8	10	27	
Endangered species	0	0	0	0	0	0	0	0	0	0	0	0	
Threatened species	0	0	0	0	0	0	0	0	0	0	0	0	
Species of concern	1	1	1	0	1	2	0	0	0	1	1	3	

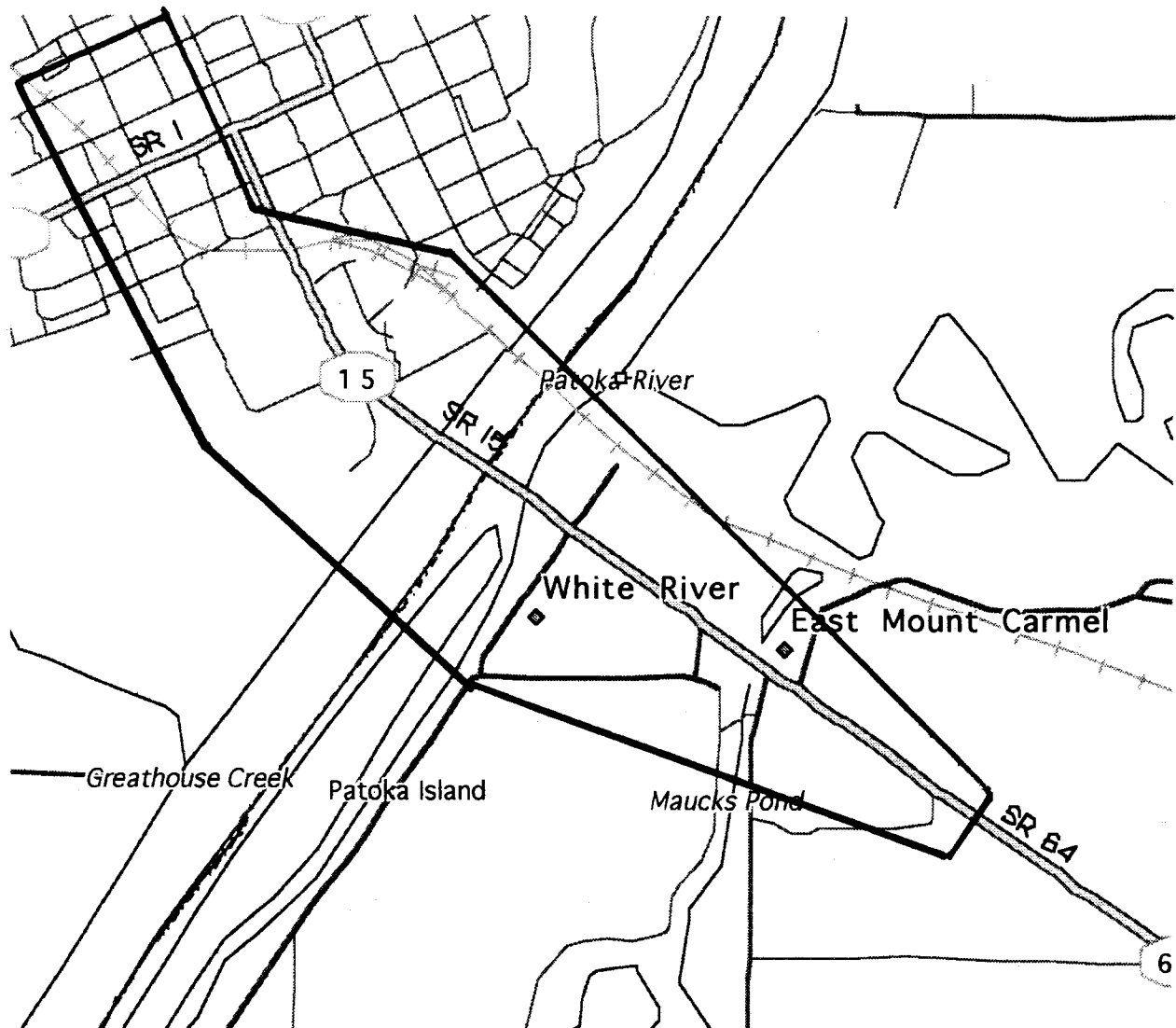


Figure 1. Approximate location of the FAP 827 project corridor.



Figure 2: Location of census points 1 - 3.

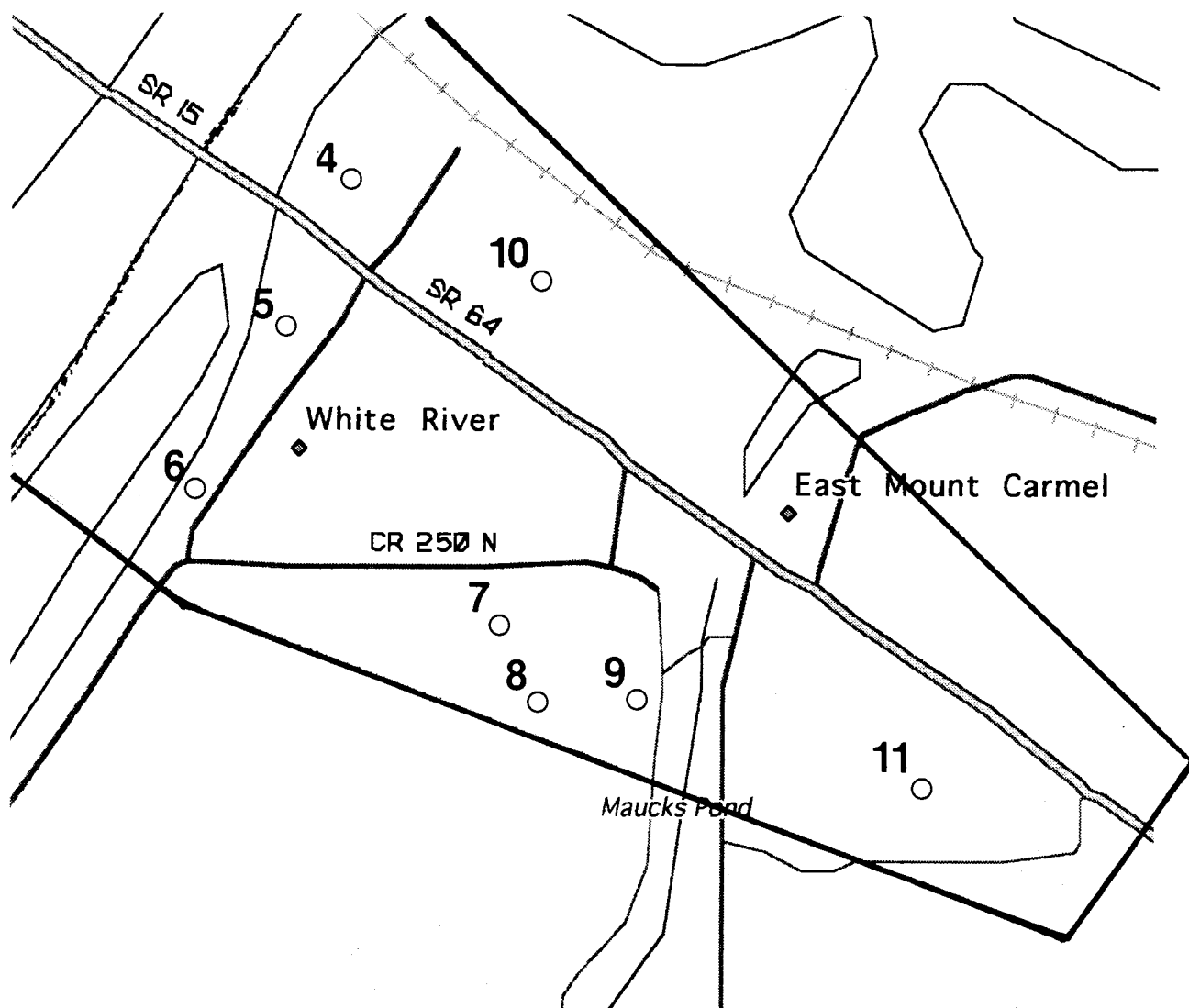


Figure 3: Location of census points 4 - 11.